



STEPPING MOTOR SPECIFICATION

MOONS' MODEL

35PM024S8-00502
4611120002401



1. RATED CHARACTERISTICS AND CONDITIONS

NO.	ITEM	SPECIFICATION	REMARK
1.1	Rated Voltage	24V DC	
1.2	Constant Current	0.5A/Phase	Chopper Driver IC
1.3	Phase Number	Two (2)	Phases A&B
1.4	Step Angle	15°	Full-Step
1.5	Excitation Method	Bipolar Full-Step	
1.6	Insulation Class	Class B	

2. ELECTRICAL CHARACTERISTICS

NO.	ITEM	SPECIFICATION	REMARK
2.1	Resistance per Phase	$5\Omega \pm 10\%$	@ 25°C
2.2	Inductance per Phase A/B	$4\text{mH} \pm 20\%$	1 kHz 1V rms
2.3	Holding Torque	190 gcm min.	Two-Phase On
2.4	Detent Torque	45 gcm max.	
2.5	Dynamic Pull-in Torque	85 gcm min	200 pps Full-Step
2.6	Dynamic Pull-in Torque	60 gcm min.	300 pps Full-Step
2.7	Dynamic Pull-out Torque	100 gcm min.	500 pps Full-Step
2.8	Dynamic Pull-out Torque	80 gcm min.	1200 pps Full-Step
2.9	Pull-in Pulse Rate	500 pps min.	No Load Full-Step
2.10	Step Angle Accuracy	$15^\circ \pm 7\%$	@1 pps Full-Step
2.11	Insulation Resistance	100 MΩ min.	Case-lead DC500V
2.12	Dielectric Strength	Leak Current 3mA max.	Case-lead AC600V 1 sec.
2.13	Temperature Rise	80K max. Two phase on	On 105x105x21 Al Plate
2.14	Direction of Rotation	CW & CCW	Seen from Flange Side

REV	DESCRIPTION	DATE
A	FIRST ISSUED	2019.03.04

SHANGHAI MOONS' ELECTRIC CO., LTD.

North Minhang Industrial Park District
168 Mingjia Rd.
Shanghai, China

3. MECHANICAL CHARACTERISTICS

NO.	ITEM	SPECIFICATION	REMARK
3.1	Radial Shaft Loading	7.5N Max.	
3.2	Axial Shaft Loading	1N Max.	
3.3	Radial Shaft Play	0.05 mm Max.	@500G
3.4	Axial Shaft Play	0.6 mm Max.	@500G
3.5	Mass	Approximate 70g	
3.6	Rotor Inertia	Approximate 2.8gcm ²	

4. OPERATING CONDITIONS

NO.	ITEM	SPECIFICATION	REMARK
4.1	Operating Temperature	-20°C ~ +50°C	
4.2	Operating Humidity	15 ~ 85% RH	No Condensation
4.3	Storage Temperature	-30°C ~ +70°C	
4.4	Storage Humidity	15~ 85% RH	No Condensation

5. RELIABILITY AND WARRANTY

NO.	SPECIFICATION	REMARKS
5.1	3,000 Hours min.	1. Normal Operating Conditions 2. Full-Step @600RPM, CW, Rated voltage, Rated current and Rated load 3. No Unusual Vibration & Noise 4. Satisfactory Electrical & Mechanical Characteristics
5.2	Satisfactory Electrical & Mechanical Characteristics	1. Vibration Test at Motor 2. 0 ~ 100 Hz Sweep for 5 Minutes 3. 1.5 mm, 3 Directional Amplitude for 30 Minutes
5.3	Satisfactory Electrical & Mechanical Characteristics	1. Shock Test at Package 2. 30 G, 3 Directions each for 1 time

6. REMARKS

6.1	An abnormal operation may extremely shorten the performance or service life.
6.2	Do not hold the motor by lead wire or PCB.
6.3	The motor is subject to change for improving the performance within the range satisfying its specification.

MOONS' PM STEPPING MOTOR CHARACTERISTICS

35PM024S8-00502(Rev.A)

Rated Voltage 24V □ Constant Phase Current 0.5A □ Bipolar □ Full-Step □ 3540M Driver



